

DO NOT GET IN EYES

Wear goggles or face shield when handling. Do not put your fingers to your eyes.

DO NOT GET ON SKIN

Wear rubber gloves when handling and wash thoroughly afterward.

DO NOT BREATHE DUST

Keep container closed when not in use. Transfer or mix product under conditions of adequate ventilation.

FIRST AID TREATMENT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with water.

If **swallowed**, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not immediately available, drink large quantities of water. Avoid alcohol. Call a physician immediately. Never give anything by mouth to an unconscious person.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Do not reuse empty container. Dispose of in a non-flammable liquid landfill approved for pesticide containers, or bury in a safe place. Consult federal, state, or local disposal authorities for approved alternative procedures such as limited open burning. Stay out of smoke and fumes.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not discharge into lakes, streams, ponds, or public waters. Use in accordance with the NPDES permit. For guidance, contact your Regional Office of the EPA.

EPA Reg. No. 1730-43



CYTOX® 2410 Industrial Microbiocide

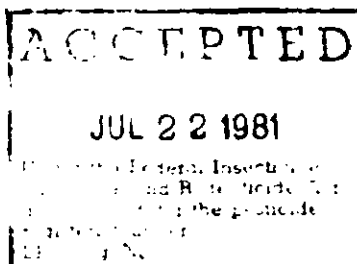
FOR MANUFACTURING USE ONLY

DANGER!

KEEP OUT OF REACH OF CHILDREN

**CORROSIVE
CAUSES EYE DAMAGE
HARMFUL IF SWALLOWED**

See side panel for additional precautions



ACTIVE INGREDIENT

Dodine (Dodecylguanidine acetate)

95%

INERT INGREDIENTS

5%

EPA Reg. No. 1730-43

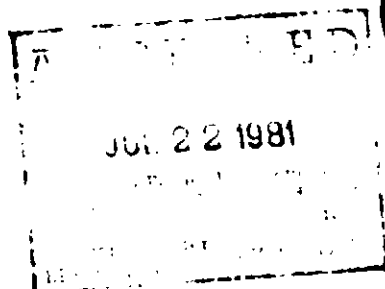
EPA Est. No. 241-NJ-1

NET WEIGHT 200 Pounds

CONDITIONS OF SALE

106

American Cyanamid Company
Industrial Chemicals Division • Wayne, New Jersey 07470



CYTOX[®] 2410

Industrial Microbiocide

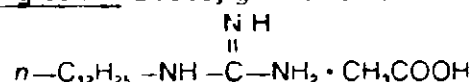
CYTOX[®] 2410 industrial microbiocide is a powdered cationic biocide sold to formulators for use as the active ingredient of products used in the control of microorganisms.

Advantages

- Highly concentrated powder for maximum economical utilization.
- Contains no heavy metals or chlorinated phenols
- Fast acting, broad spectrum efficacy
- Substantive to cellulose in high concentrations
- Intrinsically surface active
- Odorless and nonstaining

Typical Properties

Active Ingredient: Dodecylguanidine acetate (DGA)



Appearance: White, crystalline powder

Melting Point: °C 134-136

Solubility (25°C), weight percent

Water - 0.003% (630 ppm)

Lower alcohols - 7% to 23%

Between 25° and 50°C, the solubility of CYTOX 2410 is relatively constant.

Stability: The sulfate, carbonate, and other inorganic salts of dodecylguanidine are slightly soluble in water. Test media for solubility compatibility before using CYTOX 2410.

CYTOX 2410 industrial microbiocide is stable in solution under acid or slightly alkaline conditions at ordinary temperatures. Under alkaline conditions above pH 9.5, the unstable free base may be released and may decompose.

Principal Uses

CYTOX 2410 industrial microbiocide may be used in formulations to control microorganisms such as bacteria, fungi, and yeasts.

CYTOX 2410 industrial microbiocide may be used in formulations as an antimicrobial agent in paper and paperboard intended for use in packaging of non-alcohol-containing foods having a pH above 5. Dodecylguanidine acetate is approved for this use under 21 CFR 176.170.

CYTOX 2410 industrial microbiocide may be used in formulations as an antimicrobial agent in paper and paperboard for products used in industrial and agricultural applications.

Antimicrobial Activity

CYTOX 2410 industrial microbiocide is highly effective against a wide range of microorganisms. Listed below are typical minimum inhibitory concentrations (MIC) of CYTOX 2410 industrial microbiocide in aqueous systems.

Organism — Minimum Inhibitory Concentrations of CYTOX 2410 Industrial Microbiocide (ppm)

Algae

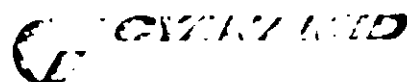
Chlamydomonas reinhardtii	2
Chlorella	0.75
Marine blue-green algae	2.5

Bacteria

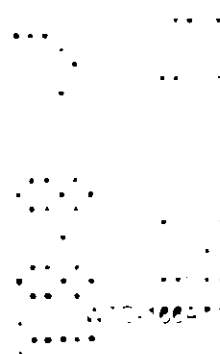
Aerobacter aerogenes	2
Desulfovibrio desulfuricans (APi) strain 1A	2
Pseudomonas aeruginosa	7.5

Fungi

Aspergillus flavus	25
Penicillium citrinum	12.5
Trichoderma viride	125



Ammonium Cyanide Company
Industrial Products Division
Waterbury, Connecticut 06705
Waterbury, New Jersey 07470



Handling

DANGER! Causes eye damage. Do not get in eyes. Wear goggles or face shield and rubber gloves when handling. Harmful if swallowed. Avoid breathing dust. Avoid contact with skin and clothing. Wash thoroughly after handling and before eating, drinking, or smoking.

First Aid

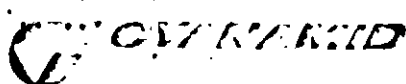
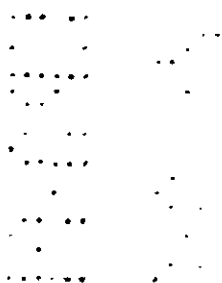
In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes call a physician. Remove and wash contaminated clothing before reuse. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or, if these are not available, drink large quantities of water. Avoid alcohol. Call a physician. Never give anything by mouth to an unconscious person.

Shipping

CYTOX 2410 industrial microbicide is shipped in nonreturnable fiber drums, net weight 100 pounds, FOB Bound Brook, New Jersey.

References

1. U.S. Patent No. 2,906,595
2. U.S. Patent No. 3,264,172
3. Canadian Patent No. 665,498
4. Canadian Patent No. 641,213
5. U.S. Patent No. 3,142,615
6. U.S. Patent No. 2,409,883
7. U.S. Patent No. 3,264,172
8. Section 176-170 of the Food Additives Regulations. (21 CFR)



Important Notice

The information and statements herein are believed to be reliable but users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. THE USE OF THIS PRODUCT BEING BEYOND OUR CONTROL, WE MAKE NO WARRANTY OR REPRESENTATION, EXPRESSED OR IMPLIED, AS TO THE EFFECTS OF SUCH USE. THE BUYER MUST ASSUME ALL RESPONSIBILITY, INCLUDING INJURY OR DAMAGE, RESULTING FROM MISUSE OF THE PRODUCT, AS SUCH OR IN COMBINATION WITH OTHER MATERIALS. Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license.

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